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VIDEOTEX/TELIDON AT TVONTARIO: PAST AND PRESENT

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Jeannine Lavallee

Author/Principal Investigator

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PAST AND PRESENT

Prepared by Jeannine Lavallee

January 1987

Manager, Office of Development Research: Judith Tobin

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SUMMARY

This paper provides an overview of the current status of TVOntario's Edutex project in terms of clients, costs, equipment placement and ownership, services offered, and current client assessments of the service. In addition to this, a historical summary outlining the different phases of TVOntario's videotex/teletext activities is provided. The purpose of the paper is to clarify the project's current situation so as to aid in the decision-making process concerning the future of Edutex.

TVOntario began experimenting with videotex and teletext technology in 1979 when a three-year Telidon field trial was launched in association with the federal Department of Communications. Since that time, TVOntario's involvement with videotex/teletext technology has evolved through what can be seen as three distinct stages of operation--an experimental stage (1979-1982), developmental stage (1982-1985), and a subscription service stage (1985 to present).

During the experimental stage, a small-scale videotex/teletext field trial service was made available to 55 schools, colleges, universities, individual homes, and special institutions in Ontario. This field trial involved the extensive testing of Telidon technology and its educational applications. When the experimental stage ended in 1982, additional government funding became available and the Ontario Telidon Network Project (OTNET) was formed in order to develop a fully operational videotex and teletext service. During this developmental project, TVO's Edutex and Edutel services were created and offered to 97 schools, libraries, and youth centers across Ontario. In 1984, the Edutex service was extended to 11 French school sites. The OTNET project officially came to an end in March 1985 and, with the termination of government funding, the videotex service was set up on a subscription basis in order to generate revenues for the project. Participants were now obliged to pay a subscription fee and the communications costs which had previously been subsidized by government funding. Due to the high communications costs incurred in the use of Edutex, most participants from the OTNET project chose to discontinue the use of TVO's Edutex service. There have been two additional government projects which have introduced new sites to the TVO services since Edutex became a subscription service.

The following chart presents the project phases and participants involved in TVO's videotex/teletext initiatives since 1982.

PARTICIPANTS IN EDUTEX/EDUTEL PROJECTS

PROJECT	TYPE OF SITE	NUMBER OF USERS	TERMINAL OWNERSHIP	ACCESS METHOD	FIXED COSTS	VARIABLE COSTS
OTNET (1982-1985)	Schools	69	Site	Datapac	BILD	Site
	Libraries	10	Site	Datapac	BILD	Site
	Youth Centres	18	TVO	Datapac	BILD	BILD
OTNET FRENCH (1984-1985)	French Schools	11	TVO	Datapac	SOS	SOS
CORRECTIONAL PILOT (1985-1986)	Correctional Institutions	3	TVO	Datapac	MCS	MCS
SOS TRIAL (1986-present)	Correctional Institutions	5	TVO	iNet	SOS	SOS
	French Schools	21	TVO	iNet	SOS	SOS

Definition of Terms:

BILD: Board of Industrial Leadership and Development or Ministry of Education
SOS: Secretary of State
MCS: Ministry of Correctional Services

TVOntario's Edutex database is currently being utilized by a total of 19 schools, libraries, and correctional institutions remaining from TVO's various government-sponsored projects. These participants became involved with videotex at different stages of the project's development. The following chart presents information on the sites that remain from each of the initial projects.

CURRENT PARTICIPANTS OF EDUTEX PROJECT

PROJECT	TYPE OF SITE	NUMBER OF USERS	TERMINAL OWNERSHIP	ACCESS METHOD	FIXED COSTS	VARIABLE COSTS
OTNET (1982-1985)	Schools	7	Site	Datapac	Site	Site
	Libraries	3	Site	Datapac	Site	Site
OTNET FRENCH (1984-1985)	French Schools	2	TVO	Datapac	Site	Site
CORRECTIONAL TRIAL (1985-1986)	Correctional Institutions	1	TVO	Datapac	MCS	MCS
SOS TRIAL (1986-present)	Correctional Institutions	1	TVO	iNet	SOS	SOS
	French Schools	5	TVO	iNet	SOS	SOS

Definition of Terms:

MCS: Ministry of Correctional Services
SOS: Secretary of State

Since 1979, TVO has received approximately $4 million for videotex/teletext initiatives from various government sources including federal funding from the Department of Communications and Secretary of State, and provincial funding from Ontario's Board of Industrial Leadership and Development, and the Ontario Ministry of Education. Project costs have amounted to approximately five and a half million over the project's seven-year history.

The report contains more detailed information on TVO's videotex/teletext projects, their funding and costs, as well as information on the databases, legal contracts, and current status of the videotex service. This represents "best available" information from accessible TVO sources. Some of the information may be revised as a result of the circulation of this report.

SOMMAIRE

Le présent exposé donne un aperçu de la situation actuelle du projet Édutex de TVOntario en ce qui concerne la clientèle, les coûts, la mise en place et la propriété de l'équipement, les services offerts ainsi que les opinions actuelles des clients au sujet du service. En outre, nous présentons une perspective historique sommaire des diverses phases des activités vidéotex/télétexte de TVOntario. Cet exposé a pour objet de clarifier l'état actuel du projet de façon à favoriser le processus de prise de décisions concernant l'avenir d'Édutex.

Les travaux d'expérimentation de la technologie du vidéotex et du télétexte à TVOntario ont débuté en 1979 avec la mise en route d'un essai de Télidon sur le terrain, d'une durée de trois ans, conjointement avec le ministère fédéral des Communications. Depuis ce temps, la participation de TVOntario à la technologie du vidéotex/télétexte a évolué en trois phases distinctes d'exploitation -- une phase expérimentale (de 1979 à 1982), une phase de développement (de 1982 à 1985) et une phase d'abonnement au service (de 1985 jusqu'à ce jour).

Au cours de la phase expérimentale, un service à petite échelle de vidéotex/télétexte fut mis à la disposition de 55 écoles, collèges, universités, foyers, et institutions spécialisées en Ontario. Cet essai « sur le terrain » comportait une vérification en profondeur de la technologie Télidon et de ses applications pédagogiques. À la fin de cette phase, en 1982, le gouvernement débloqua des fonds additionnels et le réseau Télidon de l'Ontario (OTNET) fut institué en vue de l'établissement d'un service vidéotex et télétexte complètement opérationnel. Au cours de ce projet de développement, les services Édutex et Édutel de TVOntario virent le jour et furent offerts dans 97 écoles, bibliothèques et centres d'emploi pour la jeunesse un peu partout en Ontario. En 1984, le service Édutex fut étendu à 11 établissements scolaires de langue française. Le projet OTNET a officiellement pris fin en mars 1985 et, l'octroi de fonds par le gouvernement prenant fin, le service vidéotex fut institué selon une formule d'abonnement afin d'engendrer les revenus nécessaires. Le participants étaient dès lors tenus d'acquitter un droit d'abonnement ainsi que les frais de communication qui jusque-là étaient subventionnés à même le financement gouvernemental. En raison des frais élevés de communication que comportait l'utilisation d'Édutex, la plupart des participants au projet OTNET ont préféré cesser d'utiliser le service Édutex de TVOntario. Depuis qu'Édutex est devenu un service offert par abonnement, deux projets supplémentaires du gouvernement ont ouvert de nouveaux sites au service de TVOntario.

Le tableau suivant présente les phases du projet ainsi que les participants aux initiatives vidéotex/télétexte de TVOntario depuis 1982.

PARTICIPANTS AUX PROJETS ÉDUTEX/ÉDUTEL

PROJET	TYPE DE SITE	NOMBRE D'UTILISATEURS	PROPRIÉTÉ DU TERMINAL	MÉTHODE D'ACCÈS	FRAIS FIXES	FRAIS VARIABLES
OTNET (1982-1985)	Écoles	69	Site	Datapac	C.L.D.I.	Site
	Bibliothèques	10	Site	Datapac	C.L.D.I.	Site
	Centres de jeunes	18	TVO	Datapac	C.L.D.I.	C.L.D.I.
OTNET en français (1984-1985)	Écoles françaises	11	TVO	Datapac	S.E.	S.E.
PROJET PILOTE CORRECTIONNEL (1985-1986)	Établissements correctionnels	3	TVO	Datapac	M.S.C.	M.S.C.
ESSAI SOS (1986- à ce jour)	Établissements correctionnels	5	TVO	iNet	S.E.	S.E.
	Écoles françaises	21	TVO	iNet	S.E.	S.E.

Légende:

C.L.D.I.: Conseil de leadership et de développement industriels ou ministère de l'Education
S.E.: Secrétariat d'Etat
M.S.C.: Ministère des services correctionnels

Au total, 19 écoles et bibliothèques, ainsi que des établissements correctionnels qui autrefois participaient à divers projets de TVOntario parrainés par le gouvernement, utilisent actuellement la base de données Édutex de TVOntario. Les participants se sont intéressés au vidéotex à différentes étapes de son évolution. Le tableau ci-dessous présente les données sur les sites restants de chacun des projets initiaux.

PARTICIPANTS ACTUELS AU PROJET ÉDUTEX

PROJET	TYPE DE SITE	NOMBRE D'UTILISATEURS	PROPRIÉTÉ DU TERMINAL	MÉTHODE D'ACCÈS	FRAIS FIXES	FRAIS VARIABLES
OTNET (1982-1985)	Écoles	7	Site	Datapac	Site	Site
	Bibliothèques	3	Site	Datapac	Site	Site
OTNET en français (1984-1985)	Écoles françaises	2	TVO	Datapac	Site	Site
PROJET PILOTE CORRECTIONNEL (1985-1986)	Établissements correctionnels	1	TVO	Datapac	M.S.C.	M.S.C.
ESSAI SOS (1986- à ce jour)	Établissements correctionnels	1	TVO	iNet	S.E.	S.E.
	Écoles françaises	5	TVO	iNet	S.E.	S.E.

Légende:

M.S.C.: Ministère des services correctionnels
S.E.: Secrétariat d'Etat

Depuis 1979, TVOntario a reçu pour ses projets vidéotex/télétexte quelque 4 millions de dollars de diverses sources gouvernementales, et notamment du ministère des Communications et du Secrétariat d'État, ainsi que des subventions octroyées par le Conseil de leadership et de développement industriels de l'Ontario et le ministère ontarien de l'Éducation. Depuis le lancement du projet il y a sept ans, les frais se sont élevés à quelque 5,5 millions de dollars.

Le rapport contient des renseignements plus détaillés sur les projets vidéotex/télétexte de TVOntario, leur financement et les frais engagés, ainsi que sur les bases de données, les engagements contractuels et la situation actuelle du service vidéotex. Il constitue les « meilleurs renseignements disponibles » provenant des sources accessibles à TVOntario. Il pourrait s'avérer nécessaire de réviser certaines données à la suite de la diffusion du présent rapport.

INTRODUCTION

This paper provides an overview of the current status of TVOntario's Edutex project in terms of clients, costs, equipment placement and ownership, services offered, and current client assessments of the service. In addition to this, a historical summary outlining the different phases of TVOntario's videotex/teletext activities is provided. The purpose of the paper is to clarify the project's current situation so as to aid in the decision-making process concerning the future of Edutex.

Principal sources consulted in the compilation of this research paper were:

1. Files and other documents from TVO's videotex projects;

2. TVO videotex project staff;

3. Current clients of Edutex;

4. Other staff at TVO.

The first section of this research report provides a historical overview of TVO's videotex/teletext projects, outlining phases of development, project funding, services provided, and users served. A financial summary presenting total costs of the project and government contributions to date concludes this section. The second section deals with the current state of the Edutex project with specific reference to current users, costs involved in using the Edutex service, equipment placement and location, services provided, and user assessments of the service.

(This paper represents "best available" information from accessible TVO sources with the result that some of the information may require revision as a result of its circulation in this report.)

HISTORY OF TVONTARIO'S VIDEOTEX/TELETEXT INITIATIVES

Definition of Terms

Videotex is the name given to encoded text and graphics delivered to the user via telephone or other wired, two-way connection. Teletext is the term for graphics and textual information broadcast to the user via a television signal. The main difference between the two services is that videotex is a two-way interactive system which involves communications costs for data transmission whereas teletext is a one-way broadcast system which uses available airwave spectrum to transmit the signal, and therefore does not involve any incremental communications costs. In 1979, TVOntario embarked upon what was to be the beginning of a seven-year undertaking involving the development and implementation of a TVO videotex service, initially labelled "Telidon" and later known as "Edutex," and a teletext service which was later known as "Edutel."

The term Telidon refers to the Canadian videotex protocol for the creation and transmission of colour graphics and text. Telidon was developed in 1978 by the federal Department of Communications. An enhanced version of this protocol (NAPLPS) was accepted as the official North American standard for videotex in 1983. This standard was used in the development of TVO's videotex databases and it ensures that all videotex decoders used in North America can receive videotex information regardless of make or model type.

Overview

When the Ontario Educational Communications Authority was first established in 1970, it was given a mandate to provide educational opportunities to the people of Ontario through the application of electronic and associated media. With this mandate in mind, TVO management began investigating European teletext technologies in 1978 for their potential to add a useful dimension to the TVO television service. In that same year, the federal Department of Communications announced the development of a Canadian technology called Telidon and TVO agreed to participate in a federally-funded field trial of both teletext and videotex technology.

TVO's original vision for Telidon was develop a videotex/teletext service which would offer both time-sensitive and archival information to a wide spectrum of users in both institutional and at-home settings. Interaction with other existing educational

databases and commercial data banks along with the eventual downloading of information to local memory banks was also part of TVO's goals for Telidon.[1] This new technology presented enormous potential for educational use as a cost-effective alternative to the conventional printing and distribution of materials related to educational television, as an efficient form of electronic publication, and as a medium for information retrieval, computer-based learning, and interactive dialogue.

Over the past seven years TVOntario's videotex/teletext project can be seen as having evolved in three distinct stages and has been funded by various government sources on an ad hoc basis. The following chart outlines these stages of evolution and the government-sponsored projects which were associated with each stage.

YEAR	STAGE OF EVOLUTION	GOVERNMENT-SPONSORED PROJECTS
1979-1982	Experimental	Field Trial 1979-1982
1982-1985	Developmental	OTNET Project 1982-84 OTNET French School Project 1984-85
1985 ---	Subscription Service	Correctional Site Pilot 1985-86 SOS Trial Project 1986 to Present

Beginning in 1979, TVOntario's Telidon project was operated on an experimental field trial basis for three years. In 1982, the project entered a developmental phase which, through a government funded project called OTNET (Ontario Telidon Network Project), was designed to establish a TVO videotex service called Edutex and a teletext service called Edutel for the use of secondary schools, public libraries, and youth employment centers. In 1985, the government-funded OTNET project ended and TVO's Edutex service began to be operated on a subscription service basis in order to provide a source of revenue for the videotex/teletext operation. Two government-sponsored projects were initiated in this stage of development. A detailed description of the projects associated with each of these three stages of development is provided in the following text.

For a compilation of the evaluative research on TVO's videotex projects, see ODR Working Paper 86-10, Videotex/Telidon: An Overview of TVOntario's Research, available from Development Research.

Experimental Stage: Field Trial 1979-1982

Between 1979 and 1982 TVOntario conducted a field trial of Telidon in association with the federal Department of Communications who provided funding of $1.113 million. This field trial was designed to test the components of a combined broadcast and wired-network Telidon system, and to evaluate the utility and marketability of this new technology in an educational context. The project initially focused on experimentation with hardware and a variety of transmission modes. Next, the project began the development and implementation of an operational Telidon system. Once the operational elements were in place, an experimental videotex/teletext service was made available to users so that the technical effectiveness and educational applications of Telidon could be assessed.

TVOntario chose to conduct its field tests in a total of 55 user locations which included schools, colleges, universities, libraries, individual homes, and special institutions. Participants were selected for the trial based upon proposals submitted by interested applicants. These proposals outlined the applicant's needs and interest in the Telidon program. Participating sites were supplied with equipment (Norpak decoders and Electrohome monitors) necessary to receive TVO's videotex/teletext transmissions and bore no cost for participation in the project. Equipment for the trial was on loan to TVO from the Department of Communications and was to be returned to the DOC at the end of the trial. During the three-year project, an on-line database of 5,000 pages was created by TVO and outside institutions, in addition to a 120-page daily teletext broadcast service.

Developmental Stage: OTNET Project 1982-1984

At the end of the three-year field trial in April 1982, TVOntario launched a two-year program called the Ontario Telidon Network Project (OTNET) in 69 schools, 10 libraries, and 18 youth employment centres across the province. OTNET was implemented with a grant of $210,167 from the federal Department of Communications' "Industry Investment Stimulation Program" (IISP), and a $1,950,000 grant from the Ontario government's Board of Industrial Leadership (BILD).

Costs

Component costs for a participant to receive the TVO service involved the initial purchase of a Norpak dual-mode Telidon terminal ($3,200), and communications costs consisting of (1) the installation of a Datapac 3101 dedicated communications line ($100); (2) fixed costs for the monthly rental of a Bell Canada Datapac line ($120 per month for sites on the Datapac network, $300 to $1,700 per month for off-network sites); (3) variable charges for usage of the system based upon the amount of data transmitted (average variable costs of $25 to $40 per month were incurred by most sites based on 40 hours use per month).

"Off-network sites" refers to project participants who were located outside of the Datapac network service area and who consequently required an additional analog line connection to access the Datapac network. As a result, these sites incurred long distance connection charges which greatly increased their monthly costs. (For additional information on costs, consult Appendix 5.)

Government Subsidization

The OTNET program was intended to provide participants with the means to use TVOntario's Edutex/Edutel services at little or no cost. IISP funds covered half the costs of terminals for sites involved in the project while BILD funds covered the remaining costs of terminals given to library and youth centres. In the case of school sites, the school or school board was responsible for covering the remaining 50% of the terminal costs. This amount could then be claimed as an extraordinary expenditure under the Ministry of Education's "general legislative grant program." In essence, participating sites were provided with terminals free of charge. Schools and libraries were given title of ownership to terminals deployed on their sites while youth centres received terminals on loan from TVO for the duration of the project.

In addition to receiving free terminals, participating sites were granted complete subsidization for the installation and monthly rental of communications lines, provided for from BILD funds given to the project. Youth centres were also subsidized from BILD funds for variable usage costs while school and library sites were responsible for paying their own variable charges. In summary, the only costs borne by project participants were variable usage costs incurred by school and library sites.

Services Offered

Initially the Edutex service concentrated on career information and training opportunities for Ontario youth. The SGIS database (Student Guidance Information Service), produced by the Ministry of Education, was offered to participants in English during the project's first year of operation, followed by the French version in the second year. In addition to the SGIS database, other database services were developed resulting in a service offering of 55,000 Telidon pages in both French and English by the end of the two-year project. The broadcast service, Edutel, provided 130 pages of updated information on a variety of interests such as weather, maps, financial news, and educational features. "Createx C," a new Telidon page creation software package, was also developed by TVOntario during this period and marketed internationally.

Extension of OTNET Project 1984-1985

The Ontario Telidon Network Project (OTNET) was originally intended to terminate on March 31, 1984 but due to delays in equipment deliveries the project was extended for an additional year. Terminals for the project were ordered March 31, 1982 with the expectation that delivery would occur at the beginning of the 1982/83 school year. This would allow project participants a two-year period in which to assess the service at little or no cost. Actual delivery of the terminals though did not occur until late in the 1982/83 school year. Because the user groups involved had less than a full year to assess the utility of the service, TVO applied for funding to permit the assessment period to extend through a second year, as the program originally intended. Additional funding for this one-year extension was provided for by a $500,000 joint funding grant from the Ontario government's BILD fund and the Ministry of Education (MOE). Funds were applied to the continued subsidization of site line charges and for maintenance and expansion of TVO's database. In addition to this, the Ministry of Communications' "Content Development Program" (CDP) provided $125,000 for the creation of new Telidon content.

OTNET French Schools 1984-1985

In May 1984, 11 new French schools were added as participants to the existing OTNET project. Funding for the addition of these new French sites was provided for by a grant of $113,550 from the Secretary of State's "Official Languages in Education Grant" and from TVO itself. Under the Secretary of State grant program, 50%

of expenses incurred in providing a French Telidon service to French schools qualified for funding. Secretary of State funds were applied to the purchase of new Electrohome videotex equipment for the sites, funding for all communications costs (installation, line rental, and usage costs) that the French sites incurred, and for the maintenance and expansion of the French database. Videotex equipment belonging to TVOntario was lent to the sites for the duration of their involvement in the project.

Telidon Equipment Change

Previously, Norpak Telidon terminals were purchased for all original OTNET participants but frequent equipment breakdowns of the Norpak terminals caused extensive problems with the operation of the project. In fact, according to the 1983/84 Telidon year-end report, as many as 10 of the 97 OTNET sites across the province were without functioning equipment at any one time. As a result, the decision was made to purchase Electrohome equipment for the new OTNET participants. Although this equipment was not capable of receiving the Edutel teletext service, this was not a factor since the Edutel service was not broadcast in French.

Edutex as a Subscription Service

As of March 31, 1985 the government funded OTNET project officially ended with the result that OTNET participants (both French and English sites) were now responsible for all communications costs incurred in the use of Edutex. The Edutex service became a subscription service aimed at making the project self-supporting through revenues. In order to determine the feasibility of operating the TVO service on a cost recovery basis, Market Research conducted a study in April 1985. Based on results of the survey, TVO management concluded that the value of SGIS and other databases accessible in Edutex was substantial enough to merit the support of a significant number of users[2] at a rate structure of $1,000 per year or $100 per month.

Of the 108 participating sites involved in the developmental OTNET project, only 15 sites subscribed to the Edutex service for the 1985/86 school term. According to results of TVO's 1985 Telidon Evaluation Study (schools only), there was generally strong support for Edutex, but the majority of teachers stated that they would be withdrawing from the program mainly because of cost.[3] Currently there are 12 OTNET sites still involved in the use of TVO's service.

Correctional Site Pilot Project 1985-1986

There have been two new government-sponsored projects which have introduced new participants since the project became operationalized on a subscription service basis. The first site addition project consisted of a pilot project with correctional institutions.

In May 1985, TVO and the Ministry of Correctional Services initiated a six-month videotex/teletext pilot project involving three anglophone correctional institutions. Under this project, TVO waived all subscription fees for the three sites and provided Norpak videotex/teletext equipment (returned from the OTNET project) on a loan basis to participants for the duration of the trial period. The only "real" costs involved in this project consisted of communications costs which were assumed directly by the Ministry of Correctional Services on behalf of participating sites. Mr. Joseph Tabone, administrator of this project for the Ministry, estimates that the Ministry has contributed approximately $17,000 directly on behalf of project participants which represents half the cost of the project. The other 50% of project costs paid by the Ministry were subsidized by the federal Solicitor General's program for Young Offender facilities.

The project ended in January 1986 and one correctional site (Maplehurst Complex) continued to subscribe to the service after the trial period. This site is still using the Edutex service and the Ministry of Correctional Services is currently paying all communications and subscription charges for the site.

Secretary of State (SOS) Trial 1986 to Present

In February 1986, 21 French schools (including five previous OTNET French schools) and five francophone correctional sites participated in a government-funded project called the 1986 SOS Trial project. This project was funded by a new 1985-1986 grant received from the Secretary of State's "Official Languages in Education" program. The project is currently the only government funded project still in effect for TVO's videotex service.

Subsidization

Funds amounting to $94,750 (50% of the cost of the trial) were provided to the project. These funds were applied to the purchase of Electrohome videotex equipment, subsidization of communications

costs, payment of TVOntario's Edutex subscription fees, and development and maintenance of the French database.

Costs

Equipment for the project was (is) the property of TVO and officially "on loan" until June 30, 1986 but due to changes in administration of the project and the fact that schools did not receive the equipment until late in the 1985/86 school year, the remaining sites have not returned their equipment to TVO. The only cost borne by SOS Trial participants was a $50 one-time connection charge to the iNet 2000 communications network. The SOS Trial Project is still operational for six remaining participants (five French schools and one correctional site) of the project who are currently being subsidized for all communications charges incurred. All Secretary of State funding is administered by TVO (TVO is billed directly by Bell Canada's iNet 2000 service) on behalf of participating sites.

iNet 2000

A major difference between this project and all previous TVO videotex/teletext projects is that SOS Trial participants were installed on Telecom Canada's newly developed iNet 2000 communications network. Since many sites in this SOS trial were "off-network" sites located in northern communities, iNet 2000 offered an attractive means to reduce communications costs. A key feature of the service is that the iNet 2000 network can be accessed anywhere in Canada through a toll free line, which represents substantial savings in long distance charges for off-network sites. Connection to the iNet 2000 communications network involves different communications rates (see Appendix 5) than the Datapac 3101 line rates charged to previous project participants. While costs for on-network sites work out to be roughly the same for both iNet and dedicated 3101 Datapac users, cost benefits of iNet over the Datapac system must be addressed on an individual site basis since usage and distance factors affect the decision.

Services

Electrohome equipment used in this trial project is not capable of receiving teletext, therefore, TVO's Edutex service is the only service which these sites have received.

The chart below provides a quick visual summary of TVOntario's videotex/teletext projects and the characteristic features (number and type of sites, terminal ownership and type, access method, subsidized costs) associated with each project. For a complete listing of sites participating in TVO's Edutex/Edutel projects (1982-1986), refer to Appendix 1. In addition, Appendix 4 provides a reference to TVO contracts associated with the project including contractual agreements with participants, funders, and computer software/hardware suppliers.

PARTICIPANTS IN EDUTEX/EDUTEL PROJECTS

PROJECT	TYPE OF SITE	NUMBER OF USERS	TERMINAL OWNERSHIP	ACCESS METHOD	FIXED COSTS	VARIABLE COSTS
OTNET (1982-1985)	Schools	69	Site	Datapac	BILD	Site
	Libraries	10	Site	Datapac	BILD	Site
	Youth Centres	18	TVO	Datapac	BILD	BILD
OTNET FRENCH (1984-1985)	French Schools	11	TVO	Datapac	SOS	SOS
CORRECTIONAL PILOT (1985-1986)	Correctional Institutions	3	TVO	Datapac	MCS	MCS
SOS TRIAL (1986-present)	Correctional Institutions	5	TVO	iNet	SOS	SOS
	French Schools	21*	TVO	iNet	SOS	SOS

* Includes five carry-over French school sites from 1984-85.

Note: Norpak equipment was used in the 1982-85 OTNET project and Correctional Pilot only. All other projects used Electrohome equipment.

Definition of Terms:

BILD: Board of Industrial Leadership and Development or Ministry of Education
SOS: Secretary of State
MCS: Ministry of Correctional Services

Financial Summary 1979-1986

TVO's videotex and teletext initiatives relied predominantly on government funding as a means of support. While some funds were generated from the sale of Createx C and Edutex subscription fees, these figures played a very minimal role in contributing to the maintenance of the project. For example, subscription revenues in 1985 amounted to $14,100 compared to that year's total Telidon project expenses of $346,700. The following chart summarizes total annual costs incurred in operating the videotex/teletext project from the project's inception in 1979 to TVO's 1985/86 financial year end. Government contributions to TVO's videotex/teletext project are also provided.

PROJECT COSTS AND GOVERNMENT CONTRIBUTIONS

	1979-82	1982-84	1984-85	1985-86	TOTAL 1979-1986
TOTAL COST	$1.413M	$2.714M	$1.055M	$0.347M	$5.529M
GOV'T. GRANTS	$1.113M (DOC)	$1.950M (BILD)	$0.500M (BILD)	$0.095M (SOS)	$4.106M
		$0.210M (DOC)	$0.125M (DOC)		
			$0.113M (SOS)		

Figures were derived from annual TVO financial reports and government contracts for the respective years involved.

BILD: Board of Industrial Leadership or Ministry of Education
DOC: Federal Department of Communications
SOS: Secretary of State

Total contributions by government sources:

BILD/MOE	$2.450M
DOC	$1.448M
SOS	$0.208M
Total	$4.106M

The project has incurred total costs of approximately five-and-a-half million dollars over the past seven years of operation which represents a substantial investment in TVO's Edutex database and related computer hardware. Excluding costs incurred in the experimental stage of the project, costs associated with the development of the Edutex database and related support functions represent an investment of approximately $2,000,000. Investment in TVO's host computer, page creation equipment and user terminals represents over $1,000,000 of the costs incurred in the project. The last major cost component of the project, line charges, totalled to approximately half a million dollars, averaging to about $260,000 per year that communications lines were funded for OTNET sites.

CURRENT STATUS OF EDUTEX

This section of the paper deals with the current status of TVO's Edutex project in terms of current clients, costs, equipment placement and ownership, services offered, and current user assessments of the service.

Current Clients

As of December 1986, a total of 19 project participants were still using TVOntario's Edutex service. (The Edutel service has not been operational since the summer of 1986.) This client base consists of 14 English and French schools, three libraries, and two correctional institutions (see Appendix 2 for a current listing of Edutex clients and their addresses). The current subscriber base is composed of participants remaining from TVO's OTNET Project, Correctional Site Pilot Project, and the recent Secretary of State (SOS) Trial. Because each of these initial projects was designed differently, current sites vary with respect to (1) type of equipment and ownership; (2) access method and communications cost; (3) government subsidization. The chart on the following page outlines the number of participants remaining from each of these projects and the current characteristics associated with each phase.

For individual site information regarding government subsidization, VAX user identification codes, and type of access method used, refer to Appendix 3.

Costs

Costs involved in the use of TVO's Edutex service include (1) an initial investment in special videotex equipment required to receive the service; (2) a subscription fee charged by TVO for the unlimited use of the Edutex database; and (3) communications costs incurred in the use of Bell Canada's Datapac or iNet 2000 network.

New sites interested in receiving the Edutex service would require the purchase of videotex equipment (videotex decoder, modem, colour monitor) which would typically cost in the range of $2,100-$3,000. In addition to this, TVOntario has in the past charged a

CURRENT PARTICIPANTS OF EDUTEX PROJECT

PROJECT	TYPE OF SITE	NUMBER OF USERS	TERMINAL OWNERSHIP	ACCESS METHOD	FIXED COSTS	VARIABLE COSTS
OTNET (1982-1985)	Schools	7	Site	Datapac	Site	Site
	Libraries	3	Site	Datapac	Site	Site
OTNET FRENCH (1984-1985)	French Schools	2	TVO	Datapac	Site	Site
CORRECTIONAL TRIAL (1985-1986)	Correctional Institutions	1	TVO	Datapac	MCS	MCS
SOS TRIAL (1986-present)	Correctional Institutions	1	TVO	iNet	SOS	SOS
	French Schools	5*	TVO	iNet	SOS	SOS

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* One French school site (École de La Salle) which was originally a participant of the OTNET Project is now listed under the SOS Trial. This school is currently being subsidized by Secretary of State funds as a participant of the 1986 SOS Trial.

NOTE: Norpak Dual-Mode decoders (receives videotex and teletext) are utilized by OTNET 1982-85 and Correctional Trial participants. Other participants possess Electrohome decoders which receive videotex transmissions only.

Definition of Terms:

MCS: Ministry of Correctional Services assumes all communications costs (MCS is billed directly by Bell Canada).

SOS: Secretary of State subsidizes all communications costs. (SOS funds are administered by TVO which is billed directly by Bell Canada.)

subscription fee of $1,000 per annum or $100 monthly for the unlimited use of the Edutex service. Lastly, communications costs (fixed and variable) for the actual transmission of data would be incurred. Current sites use one of two methods in order to access the Edutex database--either by a Datapac dedicated 3101 line or through the iNet 2000 communications network. While communications costs vary depending on type of access method used and amount of use, on average most sites would incur communications costs of approximately $200-$240 per month. (See Appendix 5 for more details on the costs involved in the use of Edutex.)

The only relevant costs for current Edutex clients are communications costs since Edutex subscription fees have not been charged as yet for the 1986/87 school year. All sites are responsible for communications costs incurred in the use of Edutex, with the exception of SOS Trial sites. The six sites remaining from TVO's SOS Trial currently do not pay for communications charges when accessing Edutex as TVO is billed directly by Bell Canada's iNet 2000 communications network. (TVO administers Secretary of State funding for communications costs on behalf of SOS Trial sites.)

Equipment Placement and Ownership

The following summary outlines the current status of equipment utilized in TVOntario's Edutex/Edutel projects in terms of ownership, location, and state of operation.

Ownership

TVOntario retains title of ownership to all equipment used throughout the Edutex/Edutel projects, with the exception of terminals used by schools and libraries participating in the 1982 OTNET project. Title of ownership for the terminals distributed to OTNET school and library sites officially passed to the sites on September 1, 1983, the date on which the Minister of Communications' lien on the terminals expired. All other sites which have participated have been loaned equipment owned by TVO for the duration of their involvement with the project. This equipment was (is) to be returned to TVO upon termination of site's participation.

Current Location and Use

All TVO equipment which was loaned to sites which participated in the projects has either been returned to TVO or is being used by current Edutex clients. Terminals owned by schools and libraries (total of 79 sites) which originally participated in the 1982 OTNET project are still located at these sites although only 10 of these sites are still actively using the Edutex service.

Operational Status

With the exception of one site (Ottawa Public Library), all current client sites possess operational equipment. The state of returned equipment and equipment still located in the field is uncertain due to the fact that prolonged periods without use tended to cause the equipment to become misaligned.

Additional Terminals Given to TVO

In addition to equipment utilized in TVO's videotex/teletext projects, TVO also received title to an additional 78 Norpak teletext decoders and keypads from CBC's cancelled IRIS Telidon project in March of 1985. This equipment is teletext only (can only receive broadcast transmission) and was received in an "as is" condition. Since the TVO program was winding down at the time of delivery, the equipment's operational status was not verified. The equipment is currently stored on TVO premises.

On December 21, 1984 the DOC transferred ownership of all remaining Telidon hardware used in the 1979 field trial to TVO. This consisted of approximately 30 Electrohome monitors, and approximately 13 Norpak decoders. This equipment is also stored at TVO. Its operational status is unknown.

Services Offered

TVOntario has offered both Edutex and Edutel services to project participants although currently Edutex is the only service which is presently operational.

Edutex is the educational on-line or "dial up" Telidon database developed by TVOntario. There are services in both official languages which together offer over 67,000 pages of information. The emphasis of the database is on career and employment information which accounts for approximately 90% of the database.

All information in the database is available from a main directory page which currently houses eight menu choices:

1. Telidon, Edutex and Edutel
2. Careers/Employment Information
3. Learning Materials
4. Living
5. Public Service Information
6. TVOntario Services
7. Indexes
8. French Databases

Telidon, Edutex and Edutel

As the first choice on the Edutex directory, this short section explains the background and use of Telidon and the Edutex and Edutel services.

Careers/Employment Information

The second menu choice is the menu selection which contains the English version of SGIS, and an assortment of other informational sequences on careers and employment.

SGIS is the Ontario Ministry of Education's "Student Guidance Information Service" program which contains information on more than 1,000 career descriptions as well as employment training opportunities, educational requirements, and descriptions of programs and courses offered at post-secondary institutions.

In addition to SGIS, the Careers/Employment Information menu also contains "Compass," a program on job hunting tips produced by the Canadian Employment and Immigration Centre; "Guidance Related Information" which includes topics on how to deal with application forms, job interviews, and a sequence entitled "The Ontario Youth Secretariat" which provides an information package about the Ontario Youth Secretariat's information services, employment initiatives, and special projects. In addition to this there is

also a "Job Hunt Game" and a "Job Hunt" sequence which explains how to go about finding job leads.

Learning Materials

This section includes information of a general educational nature, as well as curriculum-related sequences. Examples of sequences are:

- Advertising Layout
- Constructions in Geometry
- Math and the Calendar
- People in Profile

Living

The Living section of Edutex is composed of general interest subjects such as:

- Crime Prevention
- Human Rights
- Heart Disease
- Rabies

Public Service Information

This section consists of information on government agencies and includes information created by public service groups. The menu selection includes such sequences as "KWIC Index to Government Services" (detailed information about the Ontario government and its services), "Community Information Centre of Metro Toronto," "Get to Know Toronto," "Ontario Members of Parliament," and "Canada Employment Centres."

TVOntario Services

This menu selection provides information about TVOntario and the services it offers to the public such as telecourses, videotapes, publications, types of broadcast programming offered, and academies.

Indexes

Indexes is a list of search commands which allows the Telidon user to search information alphabetically by subject, title, and by information provider. This section also includes a "New on Edutex" selection which describes the latest additions to the service.

French Database

As the selection to access the French-language Edutex service, this menu houses the French sequences of "Carrières" (the French version of SGIS and Compass); "L'Individu" (medical information); "La Société" (crime prevention, census information); "Le Monde" (maps, weather); "Sciences et Techniques (science and technology); "Techno-References" (information on Edunet); "Index Alphabétiques" (search commands); "Banque de Données Anglaise" (menu selection for English databank); "SOS/Instructions" (operating instructions); and "Bulletins" (Edutex messages).

Edutel

Edutel is the name given to TVO's educational teletext broadcast magazine. When operational, the Edutel service offered a cycle of 130 pages of information concerning topics such as news, weather, art reviews, educational features, and student counselling information.

TVO's Edutel service has not been operational since the summer of 1986. The TES-2 equipment used to broadcast the Edutel service to clients was disconnected at this time as a result of a move in TVO's Master Control room and has yet to be reinstalled. This equipment should be functional, although it has been problematic in the past due to frequent breakdowns. The Edutel service could only be received by sites which utilized Norpak dual-mode decoders (Electrohome decoders receive videotex services only). These sites have showed little demand (with the exception of two correctional sites) for the return of the Edutel service.

Current User Assessment

Results of Client Questionnaire

During the week of December 8-12, 1986 a telephone questionnaire was administered to all current clients of the Edutex service to provide a current user assessment of the service.

According to estimates provided by guidance or library personnel, the Edutex service is used on average two hours per day, everyday, with SGIS being the dominant database accessed by users (approximately 80 to 90% of the time).

When asked about equipment reliability, most clients using the Norpak equipment reported equipment breakdowns of at least once or twice a year with an average repair cost of $100 per repair. Clients using Electrohome equipment reported no problems with the equipment.

Overall, Edutex users expressed a great deal of support for the service and all wanted to see the service continue. Both government subsidized and non-subsidized school sites and correctional centres indicated that they would like to continue their participation in the service for the current school year. It is interesting to note that one off-network site (Sacred Heart Catholic School--Newmarket), which expressed an intent to continue the service, is paying up to $800 for communications costs per month. Libraries expressed support for the service in general, but stated that the decision to continue the service would be based upon the outcome of future budget reviews. All but one site (due to technical reasons) said that the service lived up to their expectations and expressed satisfaction with the program in general.

Overall, current client assessment of the service was a positive one although some suggestions for improvements were made such as the provision of a print facility, increase in delivery speeds, more varied, up-dated database content, and compatibility with personal computer systems.

CONCLUSION

Currently only a small user market remains from the 142 sites which have utilized TVO's Edutex/Edutel databases over the past four years. Existing market size is not large enough to operate the service as a self-supporting subscription service and, based on results from TVO's past videotex/teletext projects, it appears very unlikely that any new significant market expansion can be expected with current technology due to the high costs of communications involved in the use of the service.

While current communications costs severely limit the widespread use of TVO's Edutex service, substantial possibilities exist for the expanded use of the Edutex database in other delivery forms. Alternative delivery methods such as floppy disc storage offer a way to eliminate the expensive communications costs incurred in the transmission of data over phone lines. Also, new developments in satellite and laser technologies present other future possibilities for low-cost access to the Edutex database.

NOTES

1. Syrett, John. Personal communication, 9 January, 1987.

2. TVOntario, Market Research. Feasibility of TVOntario's Telidon Service Operating on a Cost-Recovery Basis. Toronto: 1985.

3. TVOntario, Office of Project Research. The TVOntario Edutex Project: Student and Teacher Evaluation, 1984 and 1985. Report 19. Toronto: 1985.

APPENDICES

APPENDIX 1	Project Participants 1982-1986
APPENDIX 2	Current Edutex Clients
APPENDIX 3	Edutex Client Information
APPENDIX 4	Overview of TVO's Contractual Commitments
APPENDIX 5	Costs Involved in the Use of Edutex

APPENDIX 1: PROJECT PARTICIPANTS

1982-1986

OTNET Project Participants (1982-1985)

Schools	Location
Almaguin Highlands Secondary School	South River
Ancaster High & Vocational School	Ancaster
Archbishop O'Sullivan School	Kingston
Ascension of Our Lord School	Mississauga
Assumption School	Burlington
Assumption High School	Windsor
Bayside Secondary School	Belleville
Bayview Secondary School	Richmond Hill
Bishop Macdonell Catholic Secondary School	Cornwall
Bishop Macdonell High School	Guelph
Brennan High School	Windsor
Brockville Collegiate Institute	Brockville
Burnhamthorpe Collegiate Institute	Islington
Cardinal Leger School	Brampton
Cathedral Boys' High School	Hamilton
Centennial Secondary School	Belleville
Central Hastings High School	Madoc
Chippewa Secondary School	North Bay
Community Education Centre	Kirkland Lake
Cornwall Collegiate & Vocational Institute	Cornwall
Ernestown Secondary School	Odessa
Etobicoke Career Counselling Centre	Etobicoke
Fort Frances High School	Fort Frances
Glengarry District High School	Alexandria
Halton Separate School Board	Burlington
Hastings Board of Education	Belleville
Hawkesbury District High School	Hawkesbury
Holy Name of Mary High School	Mississauga
Humberside Collegiate Institute	Toronto
John XXIII School	Kingston
Kapuskasing District High School	Kapuskasing
Kenner Collegiate & Vocational Institute	Peterborough
Kent Senior School	Toronto
L'Amoreaux Collegiate Institute	Agincourt
Lake Superior High School	Terrace Bay
Lasalle Secondary School	Kingston
Laura Secord Secondary School	St. Catharines
Leaside High School	Toronto
Manitouwadge High School	Manitouwadge

Marathon High School	Marathon
M.M. Robinson High School	Burlington
Mount St. Joseph College	Sault Ste. Marie
Napanee District Secondary School	Napanee
North Addington Education Centre	Cloyne
Northern Secondary School	Toronto
Notre Dame College School	Welland
Oakwood Collegiate Institute	Toronto
Orangeville District Secondary School	Orangeville
Our Lady of Lourdes Jr. High School	Guelph
Our Lady of Mount Carmel School	Amherstview
Philip Pocock School	Mississauga
Prince Edward Collegiate Institute	Picton
Queen Elizabeth Park School	Oakville
RCSS Board Resource Centre	Cornwall
Regiopolis-Notre Dame High School	Kingston
Sacred Heart Catholic High School	Newmarket
Sacred Heart Separate School	Lasalle-Windsor
Sacred Heart School	Kenilworth
Sacred Heart School	Walkerton
Sacred Heart School	Windsor
Sir James Dunn CVS	Sault Ste. Marie
St. Ann's School	Sault Ste. Marie
St. Ignatius Loyola High School	Mississauga
St. James Jr. High School	Guelph
St. Jean Baptiste Separate School	Belle River
St. Louis Separate School	Leamington
St. Patrick's High School	Sarnia
St. Paul School	Kingston
St. Robert Catholic High School	Gormley
St. Thomas More Comprehensive	Hamilton
Stouffville District Secondary School	Stouffville
Sudbury Secondary School	Sudbury
Thomas A. Stewart Secondary School	Peterborough
Thousand Islands Secondary School	Brockville
West Hill Secondary School	Owen Sound
West Humber Collegiate Institute	Rexdale
Woodbridge High School	Woodbridge

Total = 77

N.B.: 69 terminals were deployed to schools at any one time, but due to terminal relocations the actual number of sites using TVO's services was higher than the number of terminals deployed.

Libraries	Location
Barrie Public Library	Barrie
Burlington Public Library	Burlington
Hamilton Public Library	Hamilton
North Bay Public Library	North Bay
London Public Library	London
Ottawa Public Library	Ottawa
Sudbury Public Library	Sudbury
Thunder Bay Public Library	Thunder Bay
Trenton Public Library	Trenton
Windsor Public Library	Windsor

Total = 10

Youth Employment Centres	Location
Brantford Youth Counselling Centre	Brantford
Centre for Youth Counselling	Toronto
E.P.Y.C. Centre	Peterborough
Hamilton-Wentworth Y.E.S.	Hamilton
John Howard Society of Oshawa	Oshawa
John Howard Society of Metro Toronto	Toronto
Kingston Y.E.S.	Hamilton
Mississauga Y.E.C.	Mississauga
Niagara Falls Y.E.C.	Niagara Falls
Nippissing District Y.E.S.	North Bay
Oxford Y.E.S.	Woodstock
Parachute Community Employment & Development Centre	Toronto
Peanut Employment Centre for Youth	Willowdale
Second Chance Program Y.E.C.	Guelph
Thunder Bay Y.E.C.	Thunder Bay
Waterloo Region Y.E.S.	Cambridge
Windsor Y.E.C.	Windsor
Youth Opportunities Unlimited	London

Total = 18

TNET French School Participants (1984-1985)

Schools	Location
École Secondaire Algonquin	North Bay
École Secondaire Cartier	Ottawa
École Secondaire Champlain	Ottawa

École Secondaire Charlebois	Ottawa
École Secondiare De-La-Salle	Ottawa
École Secondaire Étienne Brûlé	Willowdale
École Secondaire Franco-Jeunesse	Sudbury
École Secondaire Georges P Vanier	Hamilton
École Secondaire La Citadelle	Cornwall
École Secondaire MacDonald-Cartier	Sudbury
École Secondaire Samuel-Genest	Ottawa

Total = 11

Correctional Trial Participants (1985-1986)

Correctional Institutions	Location
Maplehurst Complex	Milton
Ontario Correctional Institute	Brampton
Vanier Centre for Women	Brampton

Total = 3

SOS Trial Participants (1986)

Correctional Institutions	Location
Cornwall Jail	Cornwall
Ministry of Correctional Services	L'Original
Ministry of Correctional Services	Cornwall
Sudbury Jail	Sudbury
Timmins Probation Office	Timmins

Total = 5

French Schools	Location
École Élémentaire André-Gary	Kapuskasing
École Élémentaire Anicet-Morin	Timmins
École Élémentaire Haileybury	Haileybury
École Élémentaire Immaculée-Conception	St. Catharines
École Élémentaire Notre Dame de Lourdes	Manitouwadge
École Élémentaire Ste. Anne	Hearst
École Élémentaire St. François-Xavier	Mattice
École Élémentaire St. Gérard	Timmins
École Élémentaire St. Jacques-Louisbourg	Hearst
École Élémentaire St. Joseph	Cochrane

École Élémentaire St. Louis	Hearst
École Intermédiaire Sacré-Coeur	Timmins
École Secondaire De La Salle	Ottawa
École Secondaire Franco-Juenesse	Sudbury
École Secondaire Garneau	Orleans
École Secondaire Georges P. Vanier	Hamilton
École Secondaire Hearst	Hearst
École Secondaire La Citadelle	Cornwall
École Secondaire Samuel-Genest	Ottawa
École Secondaire Thériault	Timmins
Jeunesse Nord	Iroquois Falls

Total = 21

Ministry of Education Sites	Location
Independent Learning Centre	Toronto
Ministry of Education	Toronto

Total Sites Who Have Used TVO Databases = 142

APPENDIX 2: ADDRESSES OF CURRENT EDUTEX CLIENTS AS OF DECEMBER 1986

English Schools

1. BISHOP MACDONELL HIGH SCHOOL
   66 Norfolk St.
   Guelph, Ontario
   N1H 4H8
   Board: Wellington
   County RCSS Board

   School Contact: Mr. John Mashio
   Position: Co-Ordin. of Computers
   Telephone: (519) 822-7671
   Board Contact: Dr. J. S. Waters
   Wellington County RCSS Board
   Box 1298, Guelph, Ont. N1H 6N6
   Telephone: (519)821-4600

2. ETOBICOKE CAREER CENTRE
   76 Keane Ave.
   Islington, Ontario
   M9B 2C4
   Board: Etobicoke
   Board of Education

   School Contact: Mr. Ross Greenwood
   Position: Director
   Telephone: (416) 394-6950
   Board Contact: Mr. Sam MacKinlay
   Etobicoke Board of Eduction
   1 Civic Centre Court
   Etobicoke, Ont. M9C 2B3
   Telephone: (416) 394-7000

3. OUR LADY OF LOURDES JUNIOR
   HIGH SCHOOL
   54 Westmount Rd.
   Guelph, Ontario
   M1H 5H7
   Board: Wellington
   County RCSS Board

   School Contract: Mr. Jim Rooney
   Position: Principal
   Telephone: (519) 836-2170
   Board Contact: Mr. J.S. Waters
   Wellington County RCSS Board
   Box 1298, Guelph, Ont. N1H 6N6
   Telephone: (519) 821-4600

4. SACRED HEART SCHOOL
   c/o Wellington County
   Separate School Board
   75 Woolwich Rd.
   Guelph, Ontario
   N1H 6N6
   Board: Wellington County
   RCSS Board

   School Contact: Mr. Bob Meyers
   Position: Principal
   Telephone: (519) 848-3732
   Board Contact: Mr. J.S. Waters
   Wellington County RCSS Board
   Box 1298, Guelph, Ont. N1H 6H6
   Telephone: (519) 821-4600

5. SACRED HEART CATHOLIC HIGH SCHOOL
185 Jane St.
Newmarket, Ontario
L3Y 6R2
Board: York Region RCSS Bd.

School Contact: Bert Gravelle
Position: Teacher/Librarian
Telephone: (416) 895-3340
Board Contact: Mr. Frank Seeley
York Region RCSS Board
21 Dunlop St., Richmond Hill,
Ontario L4C 2M6
Telephone: (416) 884-2711

6. ST. JAMES JUNIOR HIGH SCHOOL
57 Victoria Rd. N.
Guelph, Ontario
N1E 5G9
Board: Wellington County RCSS Board

School Contact: Mr. Dave Brenon
Position: Principal
Telephone: (519) 822-4290
Board Contact: Dr. J.S. Waters
Wellington County RCSS Board
Box 1298, Guelph, Ont. N1H 6H6
Telephone: (519) 821-4600

7. WEST HUMBER COLLEGIATE INSTITUTE
1675 Martin Grove Rd.
Rexdale, Ontario
M9V 3S3
Board: Etobicoke Board of Education

School Contact: Elaine Iannuzziello
Position: Head of Guidance
Telephone: (416) 394-7570
Board Contact: Mr. Sam MacKinlay
Etobicoke Board of Eduction
1 Civic Centre Court
Etobicoke, Ont., M9C 2B3
Telephone: (416) 394-7000

French Schools

8. ÉCOLE ÉLÉMENTAIRE ANICET-MORIN
1070 Power St.
Timmins, Ontario
P4R 1B4
Board: Timmins Separate School Board

School Contact: Mr. Dennis Carriere
Position: Principal
Telephone: (705) 264-4533
Board Contact: Mrs. Noella Nadeau
Director of Multi Media Centre
Timmins Separate School Board
422 Hemlock St., Timmins, Ont.
P4N 6T5
Telephone: (705) 264-9411

9. ÉCOLE SECONDAIRE DE LA SALLE
501 St. Patrick St.
Ottawa, Ontario
K1N 8R3
Board: Ottawa Board of Education

School Contact: Mr. Jules Lessare
Position: Head of Guidance
Telephone: (613) 239-2315

10. ÉCOLE SECONDAIRE GEORGES P. VANIER
50 Promenade Acadia
Hamilton, Ontario
L8W 1B8
Board: Hamilton Board of Education

School Contact: Noel Lauzon
Position: Head of Math Dept.
Telephone: (416) 387-6928

11. ÉCOLE SECONDAIRE LA CITADELLE
510 McConnell St.
Cornwall, Ontario
K6H 4M1
Board: Stormont, Dundas and Glengarry

School Contact: Paul Dumond
Position: Librarian
Telephone: (613) 933-0172
Board Contact: Mr. Ken Grant
Head of Purchasing
Stormont, Dundas & Glengarry Board
902 Second Street West
Cornwall, Ont. K6H 5S6
Telephone: (613) 933-6990

12. ÉCOLE ÉLÉMENTAIRE ST. GÉRARD
59 Golden Ave. E.
Timmins, Ontario
P4N 1R7
Board: Timmins Separate School Board

School Contact: Mr. Raoul Nelson
Position: Principal
Telephone: (705) 264-2615
Board Contact: Mrs. Noella Nadeau
Director of Multi Media Centre
Timmins Separate School Board
422 Hemlock St., Timmins, Ont.
P4N 6TS
Telephone: (705) 264-9411

13. ÉCOLE INTERMÉDIAIRE SACRÉ-COEUR
560 Dieppe St.
Timmins, Ontario
P4N 5H2
Board: Timmins Separate School Board

School Contact: Mr. Don Chardrand
Position: Principal
Telephone: (705) 264-7004
Board Contact: Mrs. Noella Nadeau
Director of Multi Media Centre
Timmins Separate School Board
422 Hemlock St., Timmins, Ont.
P4N 6TS
Telephone: (705) 264-9411

14. ÉCOLE SECONDAIRE THÉRIAULT
341 Theriault Blvd.
Timmins, Ontario
P4N 7K3
Board: Timmins Board of Education

School Contact: Mr. Antoine Garwah
Position: Computer Co-ordinator
Telephone: (705) 267-1491

Libraries

15. HAMILTON PUBLIC LIBRARY
55 York Bl.
Hamilton, Ontario
L8R 3K1

Contact: Mrs. Joyce Trebilcock
Position: Librarian
Telephone: (416) 529-8111

16. OTTAWA PUBLIC LIBRARY
120 Metcalfe St.
Ottawa, Ontario
K1P 5M2

Contact: Miss Margaret Main
Position: Head, Adult Dept.
Telephone: (613) 236-0301

17. TRENTON PUBLIC LIBRARY
18 Albert St.
Trenton, Ontario
K8V 4S3

Contact: Ms. Dorothy Davies
Position: Director
Telephone: (613) 394-3381

Correctional Institutions

18. MAPLEHURST CORRECTIONAL INSTITUTION
661 Martin St.
Hamilton, Ontario
L9T 2Y3

Contact: Mr. Fred Baker
Position: Principal, Educ. Centre
Telephone: (416) 878-8141

19. MINISTRY OF CORRECTIONAL SERVICES
1023 Queen St.
L'Original, Ontario
K0B 1K0

Contact: Mr. Robert Lacombe
Position: Superintendent
Telephone: (613) 675-4644

Non-Client Users--Ministry of Education

INDEPENDENT LEARNING CENTRE
909 Yonge St.
Toronto, Ontario
M4W 3G2

Contact: Ms. Josie Rabino
Title: Administrative Assistant
Telephone: (416) 965-2657

MINISTRY OF EDUCATION
900 Bay St.
Toronto, Ontario
M7A 1L2

Contact: Ingrid Neuber
Title: Administrative Asst.
Telephone: (416) 965-0692

APPENDIX 3: EDUTEX CLIENT INFORMATION AS OF DECEMBER 1986

VAX USER ID	SITE	EDUTEX ACCESS	SOS FUNDED
AN.MORIN	ÉCOLE ÉLÉMENTAIRE ANICET-MORIN	iNet	YES
BMGUE	BISHOP MACDONELL HIGH SCHOOL	3101 DED	NO
DE.LASAL	ÉCOLE SECONDAIRE DE LASALLE	iNet	YES
ETOBC	ETOBICOKE CAREER CENTRE	3101 DED	NO
GPVAN	ÉCOLE SECONDAIRE GEORGES P. VANIER	3103 DED	NO
HMLTN	HAMILTON PUBLIC LIBRARY	3101 DED	NO
LACIT	ÉCOLE SECONDAIRE DE LA CITADELLE	3101 DED	NO
LORIGINAL.J	MINISTRY OF CORRECTIONAL SERVICES	iNet	YES
LOURD	OUR LADY OF LOURDES HIGH SCHOOL	3101 DED	NO
MAPLE	MAPLEHURST CORRECTIONAL COMPLEX	3101 DED	YES
OTTWA	OTTAWA PUBLIC LIBRARY	3101 DED	NO
SAC.COEUR	ÉCOLE INTERMEDIAIRE SACRE-COEUR	iNet	YES
SHKNL	SACRED HEART SCHOOL	3101 DED	NO
SHNMK	SACRED HEART CATHOLIC HIGH SCHOOL	3101 DED	NO
ST. GERARD	ÉCOLE ÉLÉMENTAIRE ST. GERARD	iNet	YES
STJMS	ST. JAMES HIGH SCHOOL	3101 DED	NO
THERIAULT	ÉCOLE SECONDAIRE THÉRIAULT	iNet	YES
TRNTN	TRENTON PUBLIC LIBRARY	3101 DED	NO
WSTHM	WEST HUMBER COLLEGIATE INSTITUTE	3101 DED	NO

APPENDIX 4: OVERVIEW OF TVO'S CONTRACTUAL COMMITMENTS

The following provides an overview of TVO's contractual commitments associated with the operation of TVO's Edutex/Edutel projects. This overview includes contractual commitments to project participants, project funders, and computer hardware/software suppliers. It should be noted that all such contracts have since expired with the exception of (1) the 1986-87 Secretary of State Agreement which is still in effect and (2) contractual agreements with the project's computer hardware/software suppliers.

Agreements with Project Participants

TVO's contractual commitments with project participants consisted of contractual obligations to OTNET project participants and SOS Trial participants. No contractual requirements existed, however, with participants of TVO's Correctional Site Pilot Project.

OTNET Project Participants

The contract between the Ontario Educational Communications Authority and participating schools, libraries and youth centres involved in the original OTNET project was to be in effect until March 31, 1984. In summary, TVO's contractual commitments with project participants were: to deliver a Norpak Telidon terminal to participating sites, pay for half the cost of the participant's terminal to the manufacturer, and cover the costs of installation and monthly rental of a Datapac 3101 communications line. In the case of participating youth centres, TVO was also responsible for variable usage charges incurred in the use of the Edutex system.

With the expansion of the OTNET program in May 1984 to include 11 French school sites, TVO extended most of the contractual commitments addressed in the original OTNET contract. The contract expiry date for French school participants was June 30, 1985. TVO was responsible for the delivery of Electrohome videotex equipment (on loan from TVO) to the site, payment for the installation of a data communications link, coverage of the monthly datapac line rental, and reimbursement for monthly transmission usage costs.

SOS Trial Participants

The last addition to the TVOntario project involved five correctional institutions and 21 French schools in a Secretary of State-funded videotex trial. The contract expiry date was June 30, 1986. Under this trial project, TVO was to deliver Electrohome videotex equipment to participating sites under a loan agreement. The agreement stipulated that TVO was responsible for a maximum of 10 hours per week usage charges of the Edutex service on Bell Canada's iNet 2000 communications network.

Agreements with Project Funders

Industry Investment Stimulation Program Agreement (IISP)

EXPIRATION DATE:	March 31, 1985
CONTRACT PARTICIPANTS:	Federal Minister of Communications and TVO
MAIN PURPOSE:	To stimulate new investment in videotex by aiding in initial capital investment in Telidon terminals.
CONTRIBUTION:	$210,167
TVO OBLIGATIONS:	To follow guidelines established in the Agreement's Implementation Schedule with respect to the purchase, delivery and installation of terminals and the creation of content, to provide insurance for all terminals under the agreement until the end of the contract, and to submit monthly reports to the Minister.

Board of Industrial Leadership and Development Agreement

EXPIRATION DATE:	March 31, 1984
CONTRACT PARTICIPANTS:	BILD/MOE and TVO
MAIN PURPOSE:	To provide funding for OTNET project hardware, terminals, line charges and development of database.
CONTRIBUTION:	$1,950,000
TVO OBLIGATIONS:	To establish liaison committees with the participating ministries involved in the project, and to provide quarterly updates and expenditure records to the Ministry of Education.

BILD/MOE Agreement for Extended Telidon Funding 1984-1985

EXPIRATION DATE:	March 31, 1985
CONTRACT PARTICIPANTS:	BILD/MOE and TVO
MAIN PURPOSE:	To provide funds to extend the OTNET project for an additional year.
CONTRIBUTION:	$500,000
TVO OBLIGATONS:	Same as previous BILD/MOE Agreement.

Telidon Content Development Program Agreement (CDP)

EXPIRY DATE:	March 31, 1985
CONTRACT PARTICIPANTS:	Federal Minister of Communications and TVO
MAIN PURPOSE:	To increase the amount of content available in the Telidon format, and to increase the marketability of Edutex, Edutel, and Createx C.
CONTRIBUTION:	$125,000
TVO OBLIGATIONS:	To meet content creation goals established in the Agreement's Implementation schedule, expand the marketing activities of Createx C and to submit reports to the Ministry by specified dates.

Secretary of State Agreements

EXPIRY DATE:	Yearly grant program terminating March 31, 1988
CONTRACT PARTICIPANTS:	Bilateral Agreement with Secretary of State and Ministry of Education (on behalf of grant participants)
MAIN PURPOSE:	To provide funds for additional costs incurred in providing educational services in both official languages.
CONTRIBUTION:	$113,550 (1984-85), $94,750 (1985-86) and current year.
TVO OBLIGATIONS:	To provide a record of expenditures and return funds not used in the program.

All Secretary of State funds received by TVOntario fall under a grant program entitled "Official Languages in Education." This program began in April 1, 1983 and will continue to provide funds for qualified participants yearly until March 31, 1988, at which time the "Official Languages in Education" program will cease.

TVOntario's videotex service has received funds from this grant program each year since 1984, including 1986-87. The general purpose of this program is to provide members of the French-language community of Ontario with the opportunity to be educated in their own language. The only requirement of "project creators," according to the Secretary of State contract with the Ontario Ministry of Education, is that a detailed proposal must be submitted to the Secretary of State by the Ontario Ministry of Education according to predetermined guidelines on behalf of the project creators. Outside of this general contract between the Ministry of Education and the Secretary of State, there is no specific agreement with TVO and the Secretary of State outlining TVOntario's contractual obligations for the program. The Secretary of State issues only a Letter of Agreement stating the acceptance of the program based upon the project creator's proposal.

Computer Software/Hardware Agreements

Infomart Applications Software Contract

EXECUTION DATE:	January 31, 1983
EXPIRY DATE:	Non-exclusive license of software for 99 years
CONTRACT PARTICIPANTS:	Infomart and TVO
MAIN PURPOSE:	To grant TVO the license to use Infomart software
TVO OBLIGATIONS:	Payment of a one-time license fee, agreement to allow the use of TVO Telidon sequences in Infomart displays, confidentiality of software information, and the provision of marketing or promotional material using the Infomart name, to Infomart.

VAX Hardware and Software Agreement

CONTRACT PARTICIPANTS:	Digital Equipment of Canada and TVO
MAIN PURPOSE:	Hardware/Software Agreement for VAX host computer
TVO OBLIGATIONS:	According to TVO's MIS department, TVO is currently paying $3,765 per month for a maintenance agreement with Digital Equipment of Canada which covers the VAX host computer's hardware where Edutex is currently stored. An additional $1,001 per month is charged for maintenance

fees on VAX software. While Edutex is not the only TVO activity currently using the VAX computer, the VAX was originally purchased for the use of the Edutex service.

APPENDIX 5: COSTS INVOLVED IN THE USE OF EDUTEX

The following outlines current quotations for videotex equipment, Edutex subscription rates, and Datapac (dedicated 3101 line) and iNet 2000 communications charges.

Videotex Equipment Costs

There are several equipment options available but typically one would need the following equipment in order to receive Edutex:

* a hardware videotex decoder. .$1000 - $1500
* a modem. . . . . .$ 350 - 500
* a colour monitor . . . . . .$ 750 - $1000

Edutex Subscription Rates

Per annum $1000
Per month . . . . . $ 100

Discounts available for multiple user connection sites or school boards:

No. of Sites	Discount
1 or 2	0%
3 - 5	20%
6 - 10	30%
> 10	40%

Discounts for sign-on dates:

Sign-on Date	Price
September	$1000
October - December	$ 900
January - February	$ 800
After February	No Discount

Note: Amounts indicated reflect Edutex subscription rates charged for the 1985-86 school year. Subscription fees have not been charged to sites for the current 1986-87 school year.

Datapac Dedicated 3101 Line Charges—December 1986

Start up costs:

Installation Fee	$115

Fixed monthly 3101 dedicated line rental:

On-Network	$143/month
Off-Network	$75/month plus analog connection (Average - $500 monthly)

Variable usage charges:

Charge varies with amount of data transmitted and distance of site from host computer.	$25-40/month (Based upon 40 hours use per month)

Average cost per month:

On-Network	Approximately $200/month based on 40 hours per month usage
Off Network	Approximately $300-$800/month based on 40 hours/month

iNet 2000 Communications Charges—December 1986

Start up costs:

One Time Service Charge	$50

Monthly fixed charge:

iNet monthly user-ID charge	$ 3

Variable charges:

Per hour using TVO's Edutex Service	$ 6*
Per hour using other iNet services	$15*

* A discount of 25% applies to the hourly rate for calls made after 6 pm and before 6 am.

iNet 2000 service features:

- Toll free access offered to all regions in Ontario.
- Access to iNet features such as directory viewing, filing, editing, messaging, and conferencing.

Average cost per month:

Approximately $240 per month based upon 40 hours usage per month.